



**Control Systems Society
UK&RI Chapter**

Schrodinger's Legacy: Systems and Life

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Our command of the laws of physics and their use with computers to simulate how things work is highly advanced. It has reached a stage at which even the most detailed behaviour of complex machines and physical systems can be reproduced within a computer. For example, automotive engineers work with system models that enable them to (almost) completely specify and validate the vehicle within a computer before there is need to construct prototypes or cut metal in a factory. This lecture is about how science aims to do similar things with living organisms. I use the contributions of Erwin Schrodinger during his 16 years in Ireland as an initial point from which to describe how scientists are setting about this huge task. Starting with the scientific sense of inquiry that led Schrodinger to ask "What is Life?", I sketch out the scientific developments that are beginning, at least in part, to provide an answer to this question. During this scientific tour, we will pause from time to time to consider the social, economic, and cultural implications of seeking a scientific basis for the mechanisms of life. As a finale, I describe a particular research project in which the components of life are mathematically modelled, simulated, and studied in a computer, in a manner that echoes the way in which computer-aided design is used to develop and analyse complex engineering systems.

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Venue: LT11, Baker Building, Department of Engineering, University of Cambridge,
Trumpington Street, Cambridge

Free Admission - All Welcome

IEEE Control Systems Society UK&RI Chapter website: ewh.ieee.org/r8/ukri/css/

CUED Control Group seminar programme:

www-control.eng.cam.ac.uk/Seminars/seminars.html